AMENDMENTS

Please amend the claims as follows:

1. (currently amended) A method for three-dimensional ultrasound data acquisition, the method comprising:

(a) acquiring first and second sets of ultrasound data representing first and second three-dimensional volumes, respectively, of a patient with a volumetric imaging transducer, the first three-dimensional volume overlapping with but different than the second three-dimensional volume, the first and second three-dimensional volumes having x, y and z dimensions, each of x, y and z extending for multiple voxels; and

(b) ~~combining~~ compounding ultrasound data from the first set with ultrasound data from the second set.

2. (original) The method of Claim 1 further comprising:

(c) generating a three-dimensional representation image responsive to the combined ultrasound data.

3. (original) The method of Claim 2 wherein (c) comprises forming an extended field of view wherein the three-dimensional representation image represents both of the first and second three-dimensional volumes including at least a first portion of the first three-dimensional volume outside the second three-dimensional volume and at least a second portion of the second three-dimensional volume outside the first three-dimensional volume.

4. (currently amended) A method for three-dimensional ultrasound data acquisition, the method comprising:

(a) acquiring first and second sets of ultrasound data representing first and second three-dimensional volumes, respectively, of a patient with a volumetric imaging transducer, the first three-dimensional volume overlapping with but different than the second three-dimensional volume, the first and second three-dimensional volumes having x, y and z dimensions, each of x, y and z extending for multiple voxels; and

(b) combining ultrasound data from the first set with ultrasound data from the second set;

~~The method of Claim 1~~ wherein the volumetric imaging transducer comprises a transducer, wherein (a) comprises acquiring the first set of data with the transducer at a substantially stationary first position and acquiring the second set of data with the transducer at a substantially stationary second position different than the first position.

5. (original) The method of Claim 1 wherein the volumetric imaging transducer comprises a transducer, wherein (a) comprises acquiring the first and second sets of data while translating the transducer.

6. (previously presented) The method of Claim 1 wherein (a) comprises acquiring with the volumetric imaging transducer being one of a wobbler transducer and a multi-dimensional transducer array operable to scan the first and second three dimensional volumes.

7. (original) The method of Claim 1 wherein (b) comprises:

(b1) aligning the first set of data relative to the second set and data; and

(b2) compounding the aligned first and second sets of data.

8. (original) The method of Claim 1 further comprising:

(c) tracking a position of the volumetric imaging transducer during (a).

9. (original) The method of Claim 8 wherein (c) comprises tracking the position with a device mounted on the volumetric imaging transducer.

10. (original) The method of Claim 8 wherein (c) comprises determining the position from ultrasound data consisting of: the first set, the second set, both the first and second sets, data different than the first and second sets and combinations thereof.

11. (original) The method of Claim 10 wherein (c) comprises determining the position using one of feature and speckle tracking.

12. (currently amended) A method for three-dimensional ultrasound data acquisition, the method comprising:

(a) acquiring first and second sets of ultrasound data representing first and second three-dimensional volumes, respectively, of a patient with a volumetric imaging transducer, the first three-dimensional volume overlapping with but different than the second three-dimensional volume, the first and second three-dimensional volumes having x, y and z dimensions, each of x, y and z extending for multiple voxels;

(b) combining ultrasound data from the first set with ultrasound data from the second set; and

~~The method of Claim 1 further comprising:~~

(c) morphing a feature of the first set of ultrasound data as a function of pressure distortion.

13. (currently amended) A three-dimensional ultrasound data acquisition system for extended field of view three-dimensional imaging, the system comprising:

a volumetric imaging transducer operable to acquire first and second sets of ultrasound data representing first and second three-dimensional volumes, respectively, of a patient, the first three-dimensional volume overlapping with but different than the second three-dimensional volume, the first and second three-dimensional volumes having x, y and z dimensions, each of x, y and z extending for multiple voxels; and

a processor operable to ~~combine~~ compound ultrasound data from the first set with ultrasound data from the second set.

14. (original) The system of Claim 13 wherein the volumetric imaging transducer comprises a multi-dimensional array operable to scan with scan lines steerable in two dimensions.

15. (original) The system of Claim 13 wherein the volumetric imaging transducer comprises a wobbler transducer operable to scan with scan lines steerable in two dimensions.

16. (original) The system of Claim 13 further comprising an electromagnetic position sensor connected with the volumetric imaging transducer.

17. (original) The system of Claim 13 wherein the processor is operable to determine positions of the volumetric imaging transducer relative to the patient from ultrasound data consisting of: the first set, the second set, both the first and second sets, data different than the first and second sets and combinations thereof.

18. (currently amended) A method for three-dimensional ultrasound data acquisition, the method comprising:

(a) translating a transducer probe between first and second positions relative to a patient, the first position different than the second position;

(b) steering acoustic energy from the transducer probe at two or more different angles relative to the transducer probe during (a), the two different angles being along a dimension substantially parallel to a direction of the translation of (a);

(c) storing ultrasound data responsive to (a) and (b) and representing first and second three-dimensional regions of the patient at the first and second positions, respectively, the first and second three-dimensional regions having x, y and z dimensions, each of x, y and z extending for multiple voxels;

(d) determining a relative spacing of the first position to the second position; and

(e) ~~combining~~ compounding the ultrasound data representing the first three-dimensional region with the ultrasound data representing the second three-dimensional region as a function of the relative spacing.

19. (original) The method of Claim 18 further comprising:

(f) displaying a three-dimensional representation of an extended field of view of the combined first and second three-dimensional regions, the combined first and second three-dimensional regions being larger than the transducer probe is operable to acquire without translation.

20. (original) The method of Claim 18 wherein (d) comprises determining the relative spacing from ultrasound data.

21. (previously presented) The method of Claim 1 wherein acquiring comprises acquiring with the first and second three-dimensional volumes each being a region that is more than a two-dimensional plane within the patient.

22. (previously presented) The method of Claim 1 wherein the overlapping is overlapping by multiple scan planes.